

PhD Course (PNS0119)

Department of Aquatic Sciences and Assessment (IVM), SLU, Uppsala

Course name

Organic Micropollutants in the Aquatic Environment: Measurements and Transport from Source to Tap (Acronym: OmAqua)

5 ECTS credits

May-October 2021

MVM Building, Campus Ultuna, Uppsala

Aim

The aim of this course is to introduce students to the research field of environmental chemistry by investigating the sources, transport and fate of organic micropollutants in the environment. The course will focus on measuring organic micropollutants, such as pharmaceuticals and personal care products (PPCPs), antibiotics and perfluoroalkyl substances (PFASs), and also exploring their environmental occurrence and transport from source to tap of drinking water.

After completion of the course, the student are expected to able to:

- Explain and discuss the sources, transport and fate of common micropollutants in the aquatic environment;
- Describe and compare different analytical procedures and methods to measure organic micropollutants in the aquatic environment;
- Perform the analysis of common organic micropollutants in water samples;
- Process and interpret the data in terms of concentration calculation, risk evaluation and environmental transport from source to tap for organic micropollutants.

Target group

PhD and licentiate students

Content

The course considers knowledge on organic micropollutants in the environment with a focus on their analysis, aquatic occurrence, and transport from source to tap. Lectures and laboratory sessions will be carried out to teach students how to: conduct field work, perform chemical analysis of water samples for common micropollutants, and carry out a critical evaluation of the results. Field sampling, written and oral presentation of the chemical analysis is included in the course. The course will be in English.

Detailed program

Lectures and literature (3-7 May, 2021)	Lectures in environmental chemistry + literature reading
Field and laboratory course (7-24 September, 2021)	Field sampling Sample preparation and analysis of micropollutants in water Data evaluation
Writing assignment (27 September-8 October, 2021)	Writing report
Final workshop (15 October, 2021)	Final workshop with oral presentations

Main organiser

Focus on Soils and Water (FoSW) Graduate School

Registration

Registration by email to Foon Yin Lai: foonyin.lai@slu.se